

# **THIN FILM TRANSISTOR STRUCTURE AND MANUFACTURING METHOD THEREOF**

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## **ABSTRACT OF THE INVENTION**

A thin film transistor source/drain structure and the manufacturing method thereof are disclosed. The thin film transistor source/drain structure uses a sandwich structure to reduce the resistivity of the source/drain and upgrade the reliability. The sandwich structure preferably comprises a structure of AlNdN alloy/  
10 AlNd alloy/AlNdN alloy. The AlNdN alloy is used as a buffer layer or a diffusion barrier to prevent the AlNd alloy and an amorphous silicon layer from diffusing into each other. The other AlNdN alloy is used as a glue layer and to protect the AlNd alloy from being over-etched. The  
15 other AlNdN alloy can also prevent the AlNd alloy and the following formed ITO from contact and interaction.

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